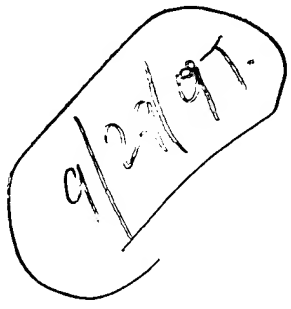
WEST Search History

DATE: Monday, May 05, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L14	l3 and l13	16	L14
L13	((427?$)!.CCLS.)	127294	L13
L12	l3 and l11	26	L12
L11	((117/$)!.CCLS.)	17564	L11
L10	l3 and l9	133	L10
L9	((257/$)!.CCLS.)	252886	L9
L8	l6 and l3	91	L8
L7	l6 l3	137644	L7
L6	((438/$)!.CCLS.)	137447	L6
L5	l3 and l4	5	L5
L4	mulpuri,.xa,xp.	468	L4
L3	l1 same l2	288	L3
L2	(gallium adj nitride)or gan	13959	L2
L1	silicon adj nitride	95087	L1

END OF SEARCH HISTORY



09 985761
09 380322
10.165354

L11 ANSWER 14 OF 19 INSPEC COPYRIGHT 2003 FIZ KARLSRUHE
AN 1998:6037429 INSPEC DN A9821-6855-156; B9811-0510D-104
TI Lateral overgrowth of **GaN** on patterned **GaN**/sapphire substrate via **selective** metal organic vapour phase epitaxy: a route to produce self supported **GaN** substrates.
AU Beaumont, B.; Gibart, P.; Vaille, M.; Haffouz, S.; Nataf, G.; Bouille, A. (Centre de Recherche sur l'Heteroepitaxie et ses Applications, Valbonne, France)
SO Journal of Crystal Growth (June 1998) vol.189-190, p.97-102. 18 refs.
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Conference: Second International Conference on Nitride Semiconductors. Tokushima, Japan, 27-31 Oct 1997
Sponsor(s): Japan Soc. Applied Phys.; IEICE; IEEE-EDS; et al
DT Conference Article; Journal
TC Experimental
CY Netherlands
LA English
AB In the present paper we propose to extend the **selective** epitaxy of **GaN** to the lateral overgrowth and to take advantage of the growth anisotropy to produce strain free **GaN** crystals. After filling the openings in a dielectric mask by **selective** epitaxy, lateral overgrowth occurs reflecting the growth anisotropy. This allows the fabrication of samples with non-planar geometry. The **selective** epitaxy was achieved by metal organics vapour phase epitaxy (MOVPE) whereas lateral overgrowth until island coalescence was carried out either by MOVPE or halide vapour phase epitaxy (HVPE). A **GaN** epitaxial layer is first grown using atmospheric pressure metalorganic vapour phase epitaxy on {0001} sapphire. The dielectric film is **silicon nitride**. The openings are achieved using standard photolithographic technology. These openings reveal free **GaN** surface and are used for epitaxial regrowth by MOVPE, and then by HVPE.
CC A6855 Thin film growth, structure, and epitaxy; A6820 Solid surface structure; A8115H Chemical vapour deposition; B0510D Epitaxial growth; B2520D II-VI and III-V semiconductors; B2550G Lithography
CT GALLIUM COMPOUNDS; III-V SEMICONDUCTORS; ISLAND STRUCTURE; MASKS; PHOTOLITHOGRAPHY; SEMICONDUCTOR EPITAXIAL LAYERS; SEMICONDUCTOR GROWTH; TRANSMISSION ELECTRON MICROSCOPY; VAPOUR PHASE EPITAXIAL GROWTH
ST sapphire substrate; **selective epitaxy**; lateral overgrowth; growth anisotropy; metal organic vapour phase epitaxy; dielectric mask; island coalescence; photolithographic technology; halide vapour phase epitaxy; MOVPE; **GaN**; Al2O3
CHI GaN bin, Ga bin, N bin; Al2O3 sur, Al2 sur, Al sur, O3 sur, O sur, Al2O3 bin, Al2 bin, Al bin, O3 bin, O bin
ET Ga*N; GaN; Ga cp; cp; N cp; In; V; Al*O; Al2O3; Al cp; O cp; Ga; Al2O; Al; O

(FILE 'HOME' ENTERED AT 11:22:58 ON 06 MAY 2003)

FILE 'INSPEC' ENTERED AT 11:23:05 ON 06 MAY 2003

FILE 'INSPEC' ENTERED AT 11:23:44 ON 06 MAY 2003

L1	1449	GALLIUM (2A)NITRIDE
L2	13046	GAN
L3	9694	SILICON (2A) NITRIDE
L4	20937	MASK
L5	309491	SELECT#######
L6	13162	L1 OR L2
L7	88	L3 AND L4 AND L5
L8	147	L3 (10A)L4
L9	12	L6 AND L8
L10	110	L3(P)L6
L11	19	L10 (P)L5

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